



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

SM

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,755	12/03/2003	Ajay Prabhakar Giri	FIS920010385US2	6808

7590 11/30/2004

IRA D. BLECKER
2070 ROUTE 52
HOPEWELL JUNCTION, NY 12533

EXAMINER

NGUYEN, DONGHAI D

ART UNIT	PAPER NUMBER
----------	--------------

3729

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/726,755

Applicant(s)

GIRI ET AL.

Examiner

Donghai D. Nguyen

Art Unit

3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/03/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. This application filed under former 37 CFR 1.60 lacks the necessary reference to the prior application. A statement reading "This is a Division of Application No. 10/260,086, filed on September 27, 2002, now US Patent No 6,765,152." should be entered following the title of the invention or as the first sentence of the specification. Also, the current status of all nonprovisional parent applications referenced should be included.

Specification

2. The abstract of the invention should be revised to reflect the method of forming a multipchip module.
3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The following title is suggested: --METHOD OF FORMING A MULTICHIP MODULE--.

Claim Objections

4. Dependent claims 19-21 are objected to because of the following informalities:
- The phrase: "claim 1" (in Claims 19-21, line 1) should be --claim 15--. Appropriate correction is required.

Art Unit: 3729

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 15-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,262,351 to Bureau et al in view of 6,424,034 to Ahn et al

Regarding claim 15, Bureau et al disclose a method of forming a multichip module (Fig. 7) comprising the steps of: forming a thin film structure (99, see Col. 2, lines 27-33 and Col. 45, lines 9-26) on a temporary carrier (1); attaching an electrically insulating frame (31) to a first surface of the thin film structure (Fig. 5); attaching at least one semiconductor device (2) to the first surface of the thin film structure (Fig. 5); and removing the temporary carrier (Figs. 5-6). Bureau et al do not disclose the step of attaching at least one semiconductor device to a second surface of the thin film structure. Ahn et al teach the attaching step as described above such as a semiconductor device (330/331) being attached to second surface of the thin film structure (210/310) for reducing timing skews or propagation delay between two semiconductor devices (Col. 4, lines 50-65). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method invention of Bureau et al by employing the teachings of attaching at least one semiconductor device to a second surface of the thin film structure as taught by Ahn et al in order to obtain a desired structure for various known benefits including for reducing timing skews or propagation delay.

Art Unit: 3729

Note that Fig. 7 of Bureau et al and/or Fig. 2 of Ahn et al shows the first surface is opposed to the second surface and an interconnectivity through the thin film structure between the semiconductor devices and the frame.

Regarding claim 16, Bureau et al disclose the frame (31) comprises an open area through which at least one semiconductor device is exposed (Fig. 5).

Regarding claims 17-18, See Col. 6, lines 9-17 of Bureau et al.

Regarding claim 20, See Col. 5, lines 63-66 of Bureau et al.

Regarding claims 19 and 21, Bureau et al do not disclose the thickness configuration as recited in these claims; however, Ahn et al teach the thin film structure has a thickness of 15 to 250 microns (Col. 4, lines 60-62) and attaching at least one passive component on one of the opposed surfaces of the thin film structure (175) for voltage regulator, filter (Col. 4, lines 37-40) and reducing propagation delay between two semiconductor devices (Col. 4, lines 50-65). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the Ahn's teaching as described in detail above onto the method invention of Bureau et al for voltage regulator, filter and reducing propagation delay.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

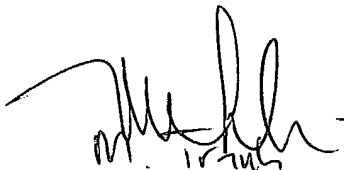
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donghai D. Nguyen whose telephone number is (571)-272-4566. The examiner can normally be reached on Monday-Friday (9:00-6:00).

Art Unit: 3729

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter D. Vo can be reached on (571)-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DN
11/24/04


Primary Examiner
AU 3729
11/24/04